

**IN THE CLAIMS:**

Please cancel claims 2-4, 10, and 15-20 without prejudice, and amend the claims as follows:

1. (Currently Amended) A method for annealing a copper layer, comprising:  
forming the copper layer on a substrate by electroplating in a first chamber of an integrated processing system;  
rinsing the substrate in a cleaning station of the integrated processing system;  
and then  
treating the copper layer in a gas environment in a second chamber of the integrated processing system, wherein the gas environment comprises nitrogen (N<sub>2</sub>) and hydrogen (H<sub>2</sub>).
- 2-4. (Canceled)
5. (Currently Amended) The method of claim [[4]] 1, wherein the hydrogen is present at a concentration of less than about 5% 4% in the gas environment.
6. (Original) The method of claim 5, wherein the copper layer is treated for a time duration less than about 5 minutes.
7. (Currently Amended) The method of claim 6, wherein the copper layer is treated at a temperature of between about 100 200 to about 500°C.
8. (Original) The method of claim 7, wherein the gas environment comprises less than about 100 parts per million of oxygen.
9. (Currently Amended) The method of claim 8, wherein the gas environment comprises a pressure of up to about 1000 760 torr.

10. (Canceled)

11. (Currently Amended) A method of annealing a copper layer, comprising:  
forming the copper layer on a substrate by electroplating in a first chamber of an  
integrated processing system;  
rinsing the substrate in a cleaning station of the integrated processing system;  
and then

treating the copper layer in a gas environment at a temperature of between about  
400 200 to about 500°C for a time duration of less than about 5 minutes in a second  
chamber of the integrated processing system; wherein the gas environment comprises  
~~a gas selected from the group consisting of nitrogen (N<sub>2</sub>) and hydrogen (H<sub>2</sub>)~~  
[[, argon,  
and helium]].

12. (Currently Amended) The method of claim 11, wherein the ~~gas environment~~  
~~further comprises hydrogen at a concentration of less than about 5%~~ temperature is  
about 250°C.

13. (Original) The method of claim 12, wherein the gas environment further  
comprises less than about 100 parts per million oxygen.

14. (Currently Amended) The method of claim 13, wherein the gas environment  
comprises a pressure of ~~up to about 1000~~ 760 torr.

15-20. (Canceled)